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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,265	04/13/2004	Tomonori Tsukagoshi	09792909-5865	5347

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EXAMINER	
CHIEN, LUCY P	
ART UNIT	**PAPER NUMBER**
2871	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/823,265	TSUKAGOSHI ET AL.	
	Examiner	Art Unit	
	Lucy P. Chien	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-9,11,12 and 24-46* is/are pending in the application.

4a) Of the above claim(s) *6-9,11,12,24-26,33-37,44 and 45* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *27-32,38-43 and 46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/17/2007 has been entered.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim *27-32,40,41* are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim **1-5,10,13,14,** of

copending Application No. 11293015. Although the conflicting claims are not identical, they are not patentably distinct from each other because

Claim 1 of the copending application anticipates Claim 27 of this application.

Claim 13 of the copending application anticipates 28 of this application.

Claim 2-5 of the copending application respectfully anticipates Claim 29-32 of this application.

Claim 15 of the copending application also anticipates 29 of this application.

Claim 10 of the copending application anticipates Claim 40 of this application

Claim 14 of the copending application anticipates Claim 41 of this application

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 27,28, 38-41,46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa (US 20050168662) in view of Kikkawa (US 6665032).

Regarding Claim 27,

Nakagawa discloses (Fig. 7) a liquid crystal display device having a microlens array (50) provided on a luminous flux incidence side (where light is entering above 50) the liquid crystal display panel (58) comprising two optical compensation layer (54,60),

each being made of an inorganic material (Page 2, [0023]) , *formed in a flat plate-like shape (from the cross sectional view shown in Figure 7 the compensation layers seem to be flat and plate like shaped. Also shown in Figure 6A and Fig. 6B the compensation layer (46,49) seem to be flat plate like shapes (rectangular and flat)).A*nd having an optical axis inclined with respect to a liquid crystal panel surface (Fig. 6B, (49)) and at least one of the first and second optical compensation layer being positioned on a luminous flux incidence side of the liquid crystal panel (54).

Nakagawa does not disclose wherein the inorganic material is cut out so that the direction of inclination of the optical axis is substantially equal to the rubbing direction of the liquid crystal panel.

Kikkawa discloses (Fig. 15) the compensation layer (201,202) having a direction of inclination of the optical axis equal to the rubbing direction (101,102) of the liquid crystal panel so that the abnormal optical axis of the LC layer resides in the same direction as the abnormal optical axis of the birefringence of the phase compensating plates therefore to improve contrast. Therefore, it would have been obvious to one of ordinary skill in the art to include Kikkawa's compensation layer optical axis equal to the rubbing direction of the liquid crystal panel to improve contrast (abstract).

The remaining limitations are a product by process limitation [See MPEP 2113], which does not distinguish the structure of the claimed device from the structure of the reference so Claim 27,40,42 are rejected as well. Kikkawa discloses the compensation layer having a direction of inclination of the optical axis equal to the rubbing direction of the liquid crystal panel therefore the device claim therefore meets this claims requirement wherein the inorganic material *is cut out* so that the direction of inclination

of the optical axis is substantially equal to the rubbing direction of the liquid crystal panel.

Regarding Claim 28,

Nakagawa discloses everything as disclosed above.

Nakagawa does not disclose wherein the first and second compensation layers are positioned on the luminous flux incidence side of the liquid crystal panel.

Kikkawa discloses (Abstract) providing two compensation films on the luminous flux side (150,24) for compensating the wavelength dependency of the overall retardation of the LCD device to improve the contract ratio.

It would have been obvious to one of ordinary skilled in the art to modify Nakagawa's display to include Kikkawa's first and second compensation layer being provided on the luminous flux side motivated by the desire for compensating the wavelength dependency of the overall retardation of the LCD device to improve the contract ratio (Abstract).

Regarding Claim 38,39,46

Nakagawa discloses the claimed invention except for the angle of inclination of at least one of the first and second optical compensation layer is approximately 75°-85° with respect to the liquid crystal panel surface. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the angle of inclination of at least one of the first and second optical compensation layer is approximately 75°-85° with respect to the liquid crystal panel surface, since it has been held that where the general conditions of a claim are disclosed in the prior art,

discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding Claim 40,

In addition to Nakagawa and Kikkawa as disclosed above, Nakagawa discloses (Fig. 6B) wherein the optical compensation layer has an outer size equal to the effective display area of the liquid crystal panel.

Regarding Claim 41

In addition to Nakagawa and Kikkawa as disclosed above, Nakagawa discloses (Fig. 5) a light source (12) a liquid crystal display device having a microlens array (Figure 7) provided on a luminous flux incidence side as a spatial light modulator. An illuminating optical system (13,35) for guiding a luminous flux emitted from a light source to the liquid crystal display device and thus illuminating the liquid crystal display device, and an image-forming lens (25) for forming an image of the liquid crystal display device. the liquid crystal display device comprising an optical compensation layer (Fig. 7) made of inorganic material (Page 2 , [0023]) *, formed in a flat plate-like shape (from the cross sectional view shown in Figure 7 the compensation layers seem to be flat and plate like shaped. Also shown in Figure 6A and Fig. 6B the compensation layer (46,49) seem to be flat plate like shapes (rectangular and flat)).*And having an optical axis inclined with respect to a liquid crystal panel surface at least on one of a luminous flux incidence side

Claim 29,31, rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa (US 20050168662) and of Kikkawa (US 6665032) in view of Suzuki et al (US 20020018162)

Regarding Claim 29,31,

Nakagawa and Kikkawa disclose everything as disclosed above.

Nakagawa and Kikkawa do not disclose the first optical compensation layer is uniaxial crystal.

Suzuki et al further discloses the inorganic material forming the optical compensation layer is uniaxial crystal (Page 20, [0227]) to improve the higher contrast image of the display.

It would have been obvious to one of ordinary skilled in the art to modify Nakagawa and Kikkawa to include Suzuki's uniaxial crystal motivated by the desire to provide a durable material to make a compensator to improve the higher contrast image of the display (Page 20, [0227]).

Claim 30,32,43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa (US 20050168662) and of Kikkawa (US 6665032) in view of Suzuki et al (US 20020018162) in view of Nishida et al (US 6052168).

Regarding Claim 30,32,43

Nakagawa, Kikkawa, Suzuki et al do not disclose the refractive index range.

Nishida et al discloses (Column 5,Row 49-56) Wherein $\Delta n*d$, which is the product of refractive index anisotropy Δ and thickness d of the inorganic material forming the optical compensation layer, is 165 nm which is less than 640 nm.

It would have been obvious to one of ordinary skill in the art, at the time of the invention to modify Nakagawa, Kikkawa and Suzuki et al to include Nishida et al's refractive index range motivated by the desire to incline the liquid crystal, which the refractive-index anisotropy generates. Therefore, the retardation to the transmitted light of the incidence-side polarizing plate occurs in the LC layer by this means the permittivity is increased. Thus, enhancing the view angle characteristic.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy P. Chien whose telephone number is 571-272-8579. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lucy P Chien
Examiner
Art Unit 2871

ANDREW SCHECHTER
PRIMARY EXAMINER